

REMARKS

Claims 5 and 11 have been amended. Claims 1, 3-7 and 9-12 are pending and under consideration. Claims 1, 6, 7 and 12 are the independent claims. No new matter is presented in this Amendment.

OBJECTION TO THE DRAWINGS:

The drawings stand object to as failing to show every feature of the invention as specified in the claims. In particular, the Examiner states that the "offset region" recited in the claims is not shown.

Applicants respectfully traverse this assertion for at least the following reason. As noted in the description of FIG. 5 in paragraph [0030] of the specification, it is disclosed that a thin film transistor includes an offset region or an LDD region, and it is disclosed that region II of FIG. 5 is referred to as an LDD region in the detailed description of the drawing. However, item II in FIG. 5 can also be an offset region. Accordingly, Applicants respectfully assert that the drawings clearly illustrated every feature of the invention as specified in the claims, and therefore respectfully request that the objection to the drawings be withdrawn.

REJECTIONS UNDER 35 U.S.C. §112:

Claims 1, 3-5, 7 and 9-11 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement.

Applicants respectfully traverse this rejection for at least the following reasons. As noted above, in the description of FIG. 5, it is disclosed that a thin film transistor includes an offset region or an LDD region. In other words, item II of FIG. 5 refers to either an LDD region or an offset region.

As noted at page 3 of the Non-Final Office Action mailed on July 6, 2009, the Examiner states that Applicants disclosed that the width between primary crystal grain boundaries should be wider than that of the LDD region, and that a width of the LDD region or the offset region is shorter than a width between primary crystal grain boundaries. Accordingly, as noted above,

since the LDD region can be replaced by the offset region, the specification clearly provides proper support for the recitation that a width of the offset region included in the activation layer is smaller than a distance between the primary crystal grain boundaries.

Accordingly, Applicants respectfully assert that claims 1 and 7, fully comply with the written description requirement and request that the rejection of claims 1 and 7 under 35 U.S.C. §112, first paragraph, be withdrawn.

Regarding the rejection of claims 3-5 and 9-11, it is noted that these claims were rejected because of their dependency from claims 1 and 7. However, as noted above, claims 1 and 7 comply with the requirements of 35 U.S.C. §112, first paragraph. Accordingly, Applicants respectfully request that the rejection of dependent claims 3-5 and 9-11 be withdrawn.

Claims 5 and 11 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement.

Applicants note that claims 5 and 11 have been amended to recite that the "primary crystal grain boundaries are substantially perpendicular to a current direction," thereby more clearly reciting the orientation of the grain boundaries with respect to the current direction.

Accordingly, Applicants respectfully request that the rejection of dependent claims 5 and 11 under 35 U.S.C. §112, first paragraph, be withdrawn.

Claims 1, 3-5, 7 and 9-11 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In particular the Examiner states that it is not clear whether Applicants claim "an offset region having no doping," or an offset region not intentionally doped or light doped. Applicants respectfully traverse this rejection for at least the following reasons.

Applicants note that "the offset region" refers to a region into which impurities are not doped, other than a channel region in an active layer formed of polysilicon. Therefore, such a term is a general term which is commonly used in the field and one of ordinary skill in the art would readily recognize the term and its definition. Therefore, Applicants respectfully assert that

the recitation of an "offset region having no doping" in claims 1 and 7 is definite.

Accordingly, Applicants respectfully assert that claims 1 and 7, fully comply with the requirement of 35 U.S.C. §112, second paragraph, and therefore request that the rejection of claims 1 and 7 be withdrawn.

Regarding the rejection of claims 3-5 and 9-11, it is noted that these claims were rejected because of their dependency from claims 1 and 7. However, as noted above, claims 1 and 7 have been amended and fully comply with the requirements of 35 U.S.C. §112, second paragraph. Accordingly, Applicants respectfully request that the rejection of dependent claims 3-5 and 9-11 be withdrawn.

REJECTIONS UNDER 35 U.S.C. §102:

Claims 1, 3-7 and 9-12 are rejected under 35 U.S.C. §102(b) as being anticipated by Oka et al. (U.S. Patent 6,184,541).

Regarding the rejection of independent claim 1, it is noted that claim 1 recites a thin film transistor (TFT) comprising an offset region having no doping and a plurality of primary crystal grain boundaries, wherein the thin film transistor is formed so that the primary crystal grain boundaries of a polysilicon substrate are not positioned in the offset region, and wherein a width of the offset region, included in an activation layer, is smaller than a distance between the primary crystal grain boundaries.

The Examiner contends that in interpreting FIGS. 1A and 1B of Oka, a region between a rightmost part of a region 4 and a channel region 8, i.e., a part indicated as a width "d" corresponds to an offset region.

However, Applicants respectfully note that the region 4 is "a low-concentration region" of an LDD region. As noted in column 2, lines 37 to 40, the reference simply discloses that "an LDD structure has a low concentration region where impurity concentration is low as well as a high concentration region where impurity concentration is high". In other words, Oka simply discloses an LDD region. Oka however, does not disclose nor suggest that the LDD structure includes an offset region.

The Examiner simply contends that in lines 60 to 66 of column 3 and lines 63 to 66 of

column 4 of Oka, a region that is not doped is disclosed, and a channel region 8 having no doping is disclosed.

However, Applicants respectfully note that nowhere in column 3, lines 60 to 66 nor in column 4, lines 63 to 66 of Oka1, it is disclosed that the LDD region includes a region that is not doped.

Furthermore, as noted above, Applicants note that "the offset region" is known to one of ordinary skill in the art as being completely different from "the LDD region" in terms of technology, and thus "the offset region" is not referred to as "the LDD region".

Accordingly, Applicants respectfully assert that Oka fails to teach or suggest, at least, this novel feature of independent claim 1.

Regarding the rejection of independent claim 6, 7 and 12, it is noted it is noted that these claims recite some substantially similar features as claim 1. Thus, the rejection of these claims is also traversed for similar reasons as set forth above.

Accordingly, Applicants respectfully assert that the rejection of claims 1, 6, 7 and 12 under 35 U.S.C. § 102(b) should be withdrawn because Oka fails to teach or suggest the novel features of independent claims 1, 6, 7 and 12.

Furthermore, Applicants respectfully assert that the rejection of dependent claims 3-5 and 9-11 under 35 U.S.C. §102(b) should be withdrawn at least because of their dependency from claim 1 and 7, and the reasons set forth above, and because the dependent claims include additional features which are not taught or suggested by the prior art. Therefore, it is respectfully submitted that claims 3-5 and 9-11 also distinguish over the prior art.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 503333.

Respectfully submitted,

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